

WHAT IS CLAIMED IS:

1. A circuit device comprising:

conductive pattern; circuit element, affixed onto the
conductive patterns; and an insulating resin, sealing the
5 conductive pattern and the circuit element while exposing at
least the bottom surface of the conductive pattern;

wherein recessed part is formed at the side surface of
the insulating resin, and side surface of the conductive pattern
that is disposed at peripheral parts is exposed from the recessed
10 part.

2. The device of Claim 1, wherein the circuit device is
mounted by attaching brazing material to the exposed side surface
and bottom surface of the conductive pattern.

3. The device of Claim 1, wherein the circuit element
15 is semiconductor element and the conductive pattern that is
disposed at the peripheral part and the semiconductor element
is connected electrically.

4. The device of Claim 1, wherein the conductive pattern
comprise die pad and bonding pad and circuit element is mounted
20 on the die pad and the bonding pad is disposed so as to surround
the die pad.

5. The device of Claim 1, wherein a plating layer is formed
on the rear surface and side surface of the conductive patterns

that is exposed from the insulating resin.

6. The device of Claim 1, wherein a covering resin is formed on the surface of the conductive pattern and the circuit element and the conductive pattern are electrically connected
5 via opening provided in the covering resin.

7. The device of Claim 6, wherein the covering resin comprises a photosensitive resin.

8. A circuit device manufacturing method comprising:
preparing a conductive foil and forming separation grooves
10 that are shallower than the thickness of the conductive foil at least at region of the conductive foil except region to be conductive pattern that form a plurality of mounting portions for circuit elements;

affixing the circuit element onto the respective mounting
15 portions of the conductive pattern;

performing molding with an insulating resin so as to cover the circuit element at the respective mounting portions in a batch and fill the separation groove;

removing the back surface of the conductive foil until
20 the insulating resin is exposed;

removing the conductive patterns at locations corresponding to boundary of the respective mounting portions to form grooves and thereby expose side surface of the conductive

patterns; and

performing separation by dicing the insulating resin along the boundary.

9. The method of Claim 8, wherein the conductive patterns
5 are electrically connected by plating film formed on the surfaces of the conductive patterns and a plating layer is formed by electrolytic plating on surfaces of the conductive patterns that are exposed from the insulating resin.

10. The method of Claim 8, wherein the conductive pattern
10 comprise die pad and bonding pad and circuit element is mounted on the die pad and the bonding pad is disposed so as to surround the die pad.

11. The method of Claim 8, wherein the circuit device
is mounted by attaching brazing material to the bottom surface
15 and side surface of the conductive pattern that is exposed from the insulating resin.

12. The method of Claim 8, wherein the groove is formed
to be greater in width than the width of the dicing blade for
performing the dicing so that the side surface of the conductive
20 patterns that are exposed from the insulating resin form recessed parts.

13. The method of Claim 8, wherein the grooves are formed
by etching.

14. A circuit device manufacturing method comprising:
preparing a conductive foil;

forming separation groove that is shallower than the
thickness of the conductive foil at least at region of the
5 conductive foil except region to be conductive patterns that
form a plurality of mounting portions for circuit elements;

affixing the circuit element onto the respective mounting
portions of the conductive pattern;

performing molding with an insulating resin so as to cover
10 the circuit element at the respective mounting portions in a
batch and fill the separation grooves;

removing the remaining thickness part of the separation
grooves to electrically separate the conductive patterns and
removing the conductive foil at locations corresponding to
15 boundary of the respective mounting portions to form grooves
and thereby expose side surface of the conductive pattern; and

performing separation by dicing the insulating resin along
the boundary.

15. The method of Claim 14, wherein the conductive pattern
20 comprise die pad and bonding pad and circuit element is mounted
on the die pad and the bonding pad is disposed so as to surround
the die pad.

16. The method of Claim 14, wherein the circuit device

is mounted by attaching brazing material to the bottom surface and side surface of the conductive pattern that are exposed from the insulating resin.

17. The method of Claim 14, wherein the groove are formed
5 to be greater in width than the width of the dicing blade for performing the dicing so that the side surface of the conductive pattern that is exposed from the insulating resin form recessed part.

18. The method of Claim 14, wherein the grooves are formed
10 by etching.